WHAT IS CLAIMED IS:

1. An angular motion measurement system disposed on a movable platform having a first section and a second section, comprising:

(a) a first measurement arrangement configured to provide a first output indicative of angular motion of the first section, said first measurement arrangement having a bandwidth above 50 Hertz and at least one of, a bias above 5 degrees per second and a scale factor above 10%;

(b) a second measurement arrangement configured to provide a second output indicative of angular motion of the second section, said second measurement arrangement having a bandwidth below 50 Hertz, a bias below 5 degrees per second and a scale factor below 10%; and

(c) a processor arrangement responsive to a plurality of inputs, which include said first output and said second output, generating a corrected output having a bandwidth above 50 Hertz, a bias below 5 degrees per second and a scale factor below 10%.

2. The system of claim 1, further comprising a third measurement arrangement configured to provide a third output indicative of relative angular motion between the first section and the second section, wherein said inputs include said third output.

3. The system of claim 2, wherein said third measurement arrangement includes at least one of a potentiometer, encoder and resolver.

4. The system of claim 1, wherein:

(a) said first output is indicative of a measurement of the angular velocity of the first section with respect to an inertial frame of reference; and

(b) said second output is indicative of a measurement of the angular velocity of the second section with respect to an inertial frame of reference.

5. The system of claim 1, wherein said first measurement arrangement includes a gyroscope.

6. The system of claim 1, wherein said second measurement arrangement includes a gyroscope.

7. The system of claim 1, wherein said second measurement arrangement includes an inertial motion unit.

8. A method to measure angular motion of a first section of a movable platform, comprising the steps of:

(a) providing a first measurement arrangement disposed on the first section, said first measurement arrangement configured to provide

a first output indicative of angular motion of the first section, said first measurement arrangement having a bandwidth above 50 Hertz and at least one of, a bias above 5 degrees per second and a scale factor above 10%;

(b) providing a second measurement arrangement disposed on a second section of the movable platform, said second measurement arrangement configured to provide a second output indicative of angular motion of the second section, said second measurement arrangement having a bandwidth below 50 Hertz, a bias below 5 degrees per second and a scale factor below 10%; and

(c) processing a plurality of inputs, which include said first output and said second output, to generate a corrected output having a bandwidth above 50 Hertz, a bias below 5 degrees per second and a scale factor below 10%.

9. The system of claim 8, further comprising the step of providing a third measurement arrangement configured to provide a third output indicative of relative angular motion between the first section and the second section, wherein said inputs include said third output.

10. The system of claim 9, wherein said third measurement arrangement includes at least one of a potentiometer, encoder and resolver.

11. The system of claim 8, wherein:

(a) said first output is indicative of a measurement of the angular velocity of the first section with respect to an inertial frame of reference; and

(b) said second output is indicative of a measurement of the angular velocity of the second section with respect to an inertial frame of reference.

12. The system of claim 8, wherein said first measurement arrangement includes a gyroscope.

13. The system of claim 8, wherein said second measurement arrangement includes a gyroscope.

14. The system of claim 8, wherein said second measurement arrangement includes an inertial motion unit.